



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,491	09/15/2003	Werner Knebel	5005.1059	2435
23280	7590	10/12/2005	EXAMINER	
DAVIDSON, DAVIDSON & KAPPEL, LLC 485 SEVENTH AVENUE, 14TH FLOOR NEW YORK, NY 10018			AKANBI, ISIAKA O	
			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 10/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

10/663,491

Applicant(s)

KNEBEL, WERNER

Examiner

Isiaka O. Akanbi

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 13-23 is/are rejected.
- 7) ☐ Claim(s) 10-11 and 24-25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement file 15 September 2003 has been entered and reference considered by the examiner.

Drawings

The examiner approves the drawings filed 15 September 2003.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-7, 12, and 14-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Silberberg et al. (10/353,063). The reference of Silberberg discloses the features of the claimed as follows:

As regard to claim 1 and 16, Silberberg discloses a microscope for CARS microscopy comprising:

means (21) for generating a pump light beam and a Stokes light beam (Page 4, par. 0062, line 5-14) that can be directed coaxially/optically through a microscope optical system (22) (Par. 73) onto a sample (29), wherein the means for generating the pump light beam and the Stokes light beam encompass a laser (21) and a micro structured optical element (221) that spectrally broadens the light of the laser (21) and a detector (26) for detecting the detection light proceeding from the sample (29) (fig. 2A).

As to claim 2, according to claim 1, Silberberg discloses wherein the laser is a pulsed laser (Page 4, par. 0062, line 5-7).

Regarding claims 3 and 17, according to claims 1 and 16, Silberberg further discloses microscope comprising: means (22) for selection of the pump light beam and/or the Stokes light beam out of the spectrally broadened light (220).

As to claim 4, Silberberg discloses wherein the means for selection contain an acoustooptical component (the SLM).

As to claim 5, Silberberg discloses wherein the means (22) for selection directs the pump light beam and the Stokes light beam to the sample (29), and directs detection light proceeding from the sample to the detector (26).

As to claim 6 and 7, Silberberg discloses wherein the means (22) for selection is adjustable/programmable for adjusting the phase in such a way that pump light beams and/or Stokes light beams of different wavelengths are selectable (Page 4, par. 0063, line 10-18).

Regarding claim 12 and 14, Silberberg discloses wherein the microscope encompasses a scanning device that provided non-descan detection (fig. 2A)(Page 11, Par. 151).

Regarding claim 15, Silberberg discloses wherein the detector/measuring system encompasses a spectrometer (page 4, par. 0062, line 1-6)(fig. 2A).

As to claim 18, 19 and 20, Silberberg discloses acquiring a resonance maximum Spectrum by the irradiation/identification of a wavelength combination of at least two substances (i.e. a pump light beam and/or a Stokes light beam) out of the pulse (210) generated by the laser (21) (page 4, par. 0062, line 1-17)(page 2, par. 0024, line 1-8).

Regarding claim 21, Silberberg discloses wherein the detection light has several wavelengths that are simultaneously detected separately from one another by blocking wavelengths shorter than a predetermined wavelength in said pulse (page 2, par. 0020, line 1-5).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 8, 9, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silberberg et al. (10/353,063) in view of Birk et al. (6,898,367 B2).

Claims 8 and 22, Silberberg disclose micro-structured optical element (221) used to broaden or disperse the light (Par. 0066, line 1-2), however the reference of Silberberg is silence regarding micro-structured optical element is constructed from a plurality of micro-optical structural elements that have at least two different optical densities. The reference of Birk disclose micro-structured optical element constructed form a plurality of micro-optical structure elements, which have at least two different optical densities (col. 5, line 52-56). It would have been obvious at the time of invention to use two reflective gratings and a dielectric filter that have at least two different optical densities, since these are well known used material.

As to claim 9 and 23, the reference of Silberberg is silent with regard to the type of material used for the micro-structured optical element (221). The reference of Birk teaches of photonic band gap material (col. 2, line 3-5). It would have been obvious at the time of invention to use photonic band gap material for micro-structured optical element for the purpose of allowing light to be manipulated (to control light and produce effects that are impossible with conventional optics) as it travels through the material, since these are well known used advantages.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Silberberg. The reference of Silberberg disclose microscope encompasses a scanning device by movement with respect to sample holder (Par. 151). It would have been obvious at the time of invention to use the sample holder movement (back and for horizontal movement) as descans and non descans operation configuration for the purpose of reducing/minimizing the operating time of scanning.

Conclusion

Allowable Subject Matter

Claims 10, 11, 24 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to claims 10 and 24, the prior art of record, taken alone or in combination, fails to disclose or render obvious wherein the micro-structured optical element is configured as a light-guiding fiber.

As to claims 11 and 25, the prior art of record, taken alone or in combination, fails to disclose or render obvious wherein the light-guiding fiber exhibits a taper.

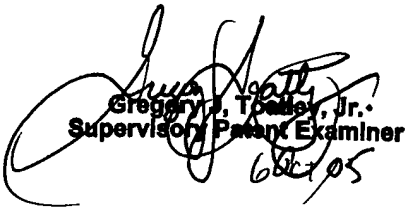
Fax/Telephone Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isiaka Akanbi whose telephone number is (571) 272-8658. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley Jr. can be reached on (571) 272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Isiaka Akanbi
October 3, 2005


Gregory J. Toatley, Jr.
Supervisory Patent Examiner
6/21/05